

## REMARKS

In view of the above amendments and the following remarks, reconsideration and further examination are requested.

By this amendment, claims 40-48 have been canceled in favor of new claims 49-57, respectively. Claims 1-39 were previously canceled. Thus, claims 49-57 remain pending.

Claims 40-48 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. This rejection is traversed and is inapplicable to new claims 49-57 for the following reasons.

The Examiner asserts that the limitations of adding “the DC offset to the 2 level mapped signal to produce a 2-level VSB modulated signal, and add the same DC offset to the 8-level mapped signal to produce an 8-level VSB modulated signal” is not described in the specification.

The Examiner asserts that the remarks in the February 13, 2004 response show that the same offset generator adds offset to both the first and second data streams. Accordingly, new claims 49 and 50 have been drafted to recite a DC offset generator operable to add a DC offset to both the 2-level mapped signal and the 8-level mapped signal to produce a 2-level VSB modulated signal and an 8-level VSB modulated signal, respectively. Method claims 54 and 55 have been drafted to recite adding a DC offset to both the 2-level mapped signal and the 8-level mapped signal to produce a 2-level VSB modulated signal and an 8-level VSB modulated signal, respectively.

As shown in Fig. 84, the offset generator 856 adds offset to the output of the VSB modulator 749. The VSB modulator 749 and offset generator 856 are both within the modulator 852a. Therefore, the addition of the offset produces the output of the modulator, i.e., VSB modulated signals.

The Examiner also asserts that the specification does not adequately describe that the offset generator adds offset to the 2-level VSB signal and 8-level VSB signal. However, this assertion is traversed for the following reasons.

The circuit of Fig. 84 is part of embodiment 5, which is disclosed in columns 47-62. Embodiment 5 can be used to apply the transmission method of the first embodiment of the invention, which is disclosed in columns 12-29. Specifically, see column 29, lines 7-9 which states

that the transmission method discussed in embodiment 1 can also be applied to ASK signals as shown in Figs. 58 and 68, which are discussed in embodiment 5, e.g., column 47.

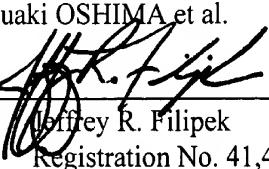
The first embodiment includes a discussion of the transmission method shown in Fig. 28, (see column 25). As can be seen in Fig. 28, a 2-level VSB demodulation is performed in block 313. In addition to the 2-level VSB, Fig. 28 also provides for use with any of 4-level VSB, (see blocks 304 and 307), 6-level VSB, (see blocks 320 and 322), and 8-level VSB, (see blocks 321 and 326). Thus, as shown by the alternatives in parenthesis in Fig. 28, and as stated in column 29, lines 7-9, in addition to the 2-level VSB, the transmission method can be used with 8-level VSB or ASK. ASK signals can be embodied by VSB signals as discussed with respect to Fig. 68(a) in connection with embodiment 5, (see column 47, lines 1-12 and Fig. 68(a)).

In summary, Fig. 84 illustrates circuitry for implementing embodiment 5 including the offset generator adding offset to the output of the VSB modulator within the modulator 852a. As set forth in the preceding paragraph, the outputs of the VSB modulator can be 2-level and 8-level VSB signals. Therefore, the specification discloses a transmission method using 2-level and 8-level VSB modulated signals in embodiment 1, Fig. 28, that the method of embodiment 1 can be applied to the signals discussed in embodiment 5, i.e., Figs. 58 and 68, and that embodiment 5 includes an offset generator adding offset to the output of the VSB modulator, as shown in Fig. 84. Therefore, the specification fully supports the claim recitations of new claims 49-57.

In view of the above, the subject matter of claims 49-57 is adequately described in the specification. Thus, it is submitted that claims 49-57 are allowable and the present application is in condition for allowance. The Examiner is invited to contact the undersigned by telephone to resolve any remaining issues.

Respectfully submitted,

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